Oracle Process Integration Pack for Oracle Utilities Field Work

Install Guide

Release 12.2

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ORACLE

Oracle Process Integration Pack for Oracle Utilities Field Work Install Guide, Release 12.2

Contents

Chapter 5

Chapter 6

Preface

Welcome to the Oracle Process Integration Pack for Oracle Utilities Field Work Install Guide for release 12.2.

The preface includes the following:

Audience

This document is intended for anyone implementing the Oracle Process Integration Pack for Oracle Utilities Field Work.

Documentation and Resources

For more information regarding this integration, foundation technology and the edge applications, refer to the following documents:

Product Documentation

Resource	Location
Oracle Process Integration Pack for Oracle Utilities Field Work documentation	https://docs.oracle.com/en/industries/energy-water/integrations-index.html
Oracle Utilities Operational Device Management documentation	https://docs.oracle.com/en/industries/energy-water/operational-device-management/index.html
Oracle Utilities Meter Data Management documentation	https://docs.oracle.com/en/industries/energy-water/meter-data-management/index.html

Additional Documentation

Resource	Location
SOA Suite 12c documentation	Refer to the SOA documentation.
Oracle Support	Visit My Oracle Support regularly to stay informed about updates and patches. Access the support site for the edge application Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1).
Oracle Technology Network (OTN) for latest versions of documents	http://www.oracle.com/technetwork/index.html
Oracle University for training opportunities	http://education.oracle.com/
Web Services Security	For more information about Web services security using Oracle Fusion Middleware 12c, refer to https://docs.oracle.com/middleware/12211/cross/webservicestasks.htm.
Oracle Fusion Middleware 12c documentation	Refer to the Oracle applications documentation page.

Resource	Location
For additional information on the type of database to use, see the "Standards Support, Supported Configurations and WebLogic Server Compatibility, Database Interoperability" section in **Oracle Fusion Middleware What's New In Oracle WebLogic Server**.	http://docs.oracle.com/middleware/1221/wls/NOTES/toc.htm
Instructions to install this integration on non-Windows/Linux platforms.	Visit My Oracle Support regularly to stay informed about updates and patches. Access the support site for the 1349320.1 Doc ID.

Updates to Documentation

The complete Oracle Process Integration Pack for Oracle Utilities Field Work documentation set is available from Oracle Help Center at https://docs.oracle.com/en/industries/energy-water/index.html.

Visit My Oracle Support for additional and updated information about the product.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support for the hearing impaired.

Visit: http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Abbreviations

The following terms and acronyms are used in documentation related to this media pack.

Applications

Abbreviation	Expanded Form
CC&B/CCB	Oracle Utilities Customer Care and Billing
MWM	Oracle Utilities Mobile Workforce Management
WAM	Oracle Utilities Work and Asset Management
ODM	Oracle Utilities Operational Device Management

Terms for Orders by Edge Application

Orders are referred to in different terms in each of the applications involved in this integrated product. In each of these systems, an order translates to:

Abbreviation	Order Name	Application
FA	Field Activity	CC&B and WAM/ODM v2.1.x
SR	Service Request	WAM v1.9.1.x
A	Activity	MWM

General Terms

Abbreviation	Expanded Form
ABCS	Application Business Connector Services
AOL	Application Object Library
CM	Customer Modification
CSR	Customer Service Representative
DB	Database
DVM	Domain Value Map
EBM	Enterprise Business Messages - Packets of data which the Mediator accepts from requesters and routes to providers. They carry the pieces of data needed for the requests to be understood and serviced.
EBO	Enterprise Business Object
EBSL	Enterprise Business Service Library
Edge Application	The applications that are involved in the integration - CC&B, MWM, and WAM/ODM
EM	Enterprise Manager

Abbreviation	Expanded Form
EOL	Enterprise Object Library
ESL	Extension Service Library
FP	Foundation Pack
IWS	Inbound Web Service
JMS	Java Message Service - The JMS producers are responsible for posting the message to the Consumer JMS Queue for the corresponding target application.
MDS	Metadata Store
NDS	Notification Download Staging
Participating Application	One of the three applications involved this integration - CC&B, MWM, or WAM/ODM
PIP	Process Integration Pack
SA	CC&B Service Agreement
SCE	SOA Core Extensions
SOA	Service-Oriented Architecture - Software modules that are provided as services can be integrated or used by several applications using SOA, even if their respective architectures are substantially different. Rather than defining an API, SOA defines the interface in terms of protocols and functionality.
SOAP	Simple Object Access Protocol. It is a protocol specification for exchanging structured information in the implementation of Web Services in computer networks.
SP	CC&B Service Point
XAI	XML Application Integration
XSD	A schema definition file
XSL	Extensible Style Language

Data Mapping

Data mapping information for each integration point is provided in Excel spreadsheet format. Please refer to the *Data Mapping Guide* included in the documentation available on the Integrations page on Oracle Help Center.

Chapter 1

Overview

This chapter describes the settings and requirements to install the Oracle Process Integration Pack for Oracle Utilities Field Work successfully:

- Integration Pack Software Requirements
- Supported Integration Combinations

Integration Pack Software Requirements

The following software and applications must be installed and configured before installing the integration pack:

- Participating Applications
- Oracle SOA/WebLogic Server

Participating Applications

- Oracle Utilities Customer Care and Billing V2.3.1.x, V2.4.0.3, or V2.5.0.x
- Oracle Utilities Mobile Workforce Management V2.2.x or V2.3.x
- Oracle Utilities Work and Asset Management V2.1.x or V1.9.1.2.4

Oracle SOA/WebLogic Server

- WebLogic Server V12.2.1.0.0 and Oracle SOA Suite 12.2.1

  Note: SOA Core extensions are not part of SOA Suite 12.2.1 by default. You must upgrade the domain.

For the most up-to-date supported edge application versions, refer to the Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1) on My Oracle Support.

Supported Integration Combinations

This integration pack supports the creation and synchronization of field work records between:

- Oracle Utilities Customer Care and Billing
- Oracle Utilities Mobile Workforce Management
- Oracle Utilities Work and Asset Management/Oracle Utilities Operational Device Management

The integration product supports these edge applications according to the following scenarios:

- Scenario 1: Integration + CCB + MWM + WAMv1.x
- Scenario 2: Integration + CCB + MWM
- Scenario 3: Integration + WAM v1.x + MWM
- Scenario 4: Integration + WAM v1.x + CCB
- Scenario 5: Integration + WAM/ODM v2.x + MWM
- Scenario 6: Integration + CCB + WAM/ODM v2.x
- Scenario 7: Integration + CCB + WAM/ODM v2.x + MWM

Chapter 2

Installing the Integration

Important! The integration installation includes two approaches: deployment plans and install build. Please note the deployment plans approach is going to be deprecated in the future. It will be supported only for the Fieldwork integration.

This chapter describes the settings and requirements to install the integration successfully:

Integration Pack Software Requirements

The following software and applications must be installed and configured before installing the integration pack. For more details, refer to product-specific installation guides.

- Participating Applications
- Oracle SOA/WebLogic Server

Participating Applications

- Oracle Utilities Customer Care and Billing V2.3.1.x, V2.4.0.3, V2.5.0.x, or higher
- Oracle Utilities Mobile Workforce Management V2.2.x, V2.3.x, or higher
- Oracle Utilities Work and Asset Management V2.1.x, V1.9.1.2.4, or higher

Oracle SOA/WebLogic Server

- WebLogic Server V12.2.1.1.0
- Oracle SOA Suite 12.2.1.1.0

  Note: SOA Core extensions are not part of SOA Suite 12.2.1.1 by default. You must upgrade the domain.

For the most up-to-date supported edge application versions, refer to the Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1) on My Oracle Support.

Supported Integration Combinations

This integration supports the edge applications in the following scenarios:

- Scenario 1: Integration + CCB + MWM + WAMv1.x
- Scenario 2: Integration + CCB + MWM
- Scenario 3: Integration + WAM v1.x + MWM
- Scenario 4: Integration + WAM v1.x + CCB
- Scenario 5: Integration + WAM/ODM v2.x + MWM
- Scenario 6: Integration + CCB + WAM/ODM v2.x
- Scenario 7: Integration + CCB + WAM/ODM v2.x + MWM

Follow the instructions related to the specific integration to install, configure, and implement the required properties.

Pre-Installation Tasks

Before installing, make sure to complete the following:

- Install SOA Core Extensions.
- Verify that the SOA Core Extension is installed successfully.

- Update the AIAInstallProperties.xml.
- Generate the SERVICES_LOCATION.

Please complete the following prior to installing the integration.

1. Install SOA Core Extensions.

   In Oracle SOA Suite 12.2.1, the option of upgrading the domain with core extensions is not available by default as part of the domain creation.

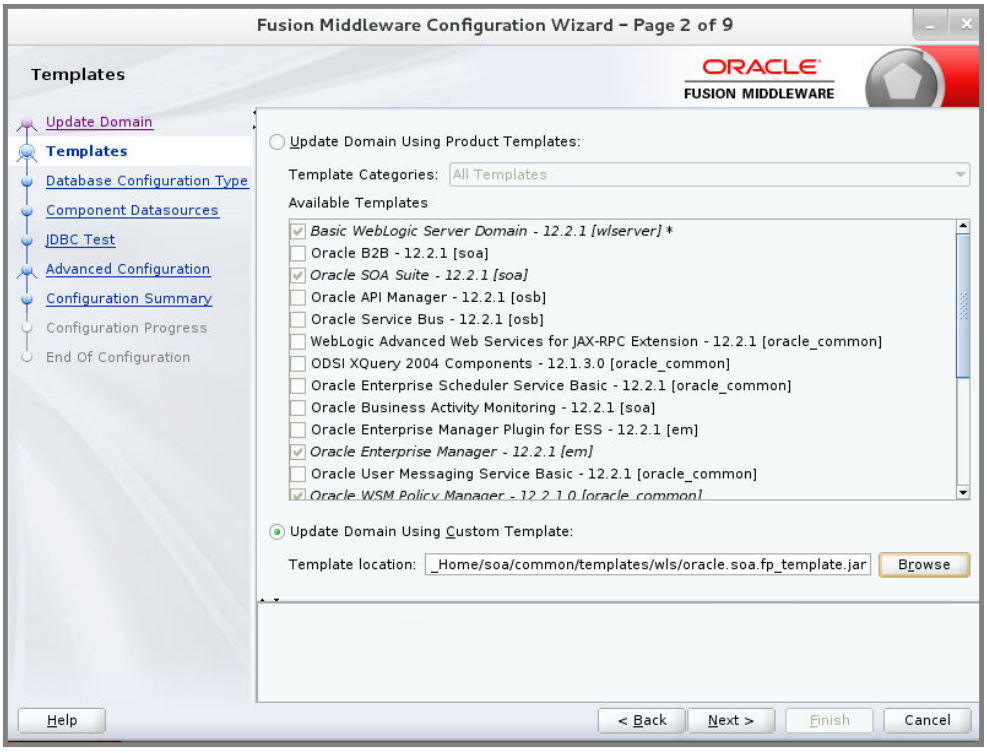
   - Once the Weblogic domain is created, upgrade the existing domain using custom template and select the fp template ($SOA_HOME/common/templates/wls/oracle.soa.fp_template.jar) while invoking the config.sh

     To ensure the proper permissions and privileges are set for all files, it is recommended that the same owner perform both tasks: installation of the Oracle Fusion Middleware product and configuration or upgrade of the WebLogic Server domain using the Configuration Wizard to install SOA Core Extensions.

   Example:

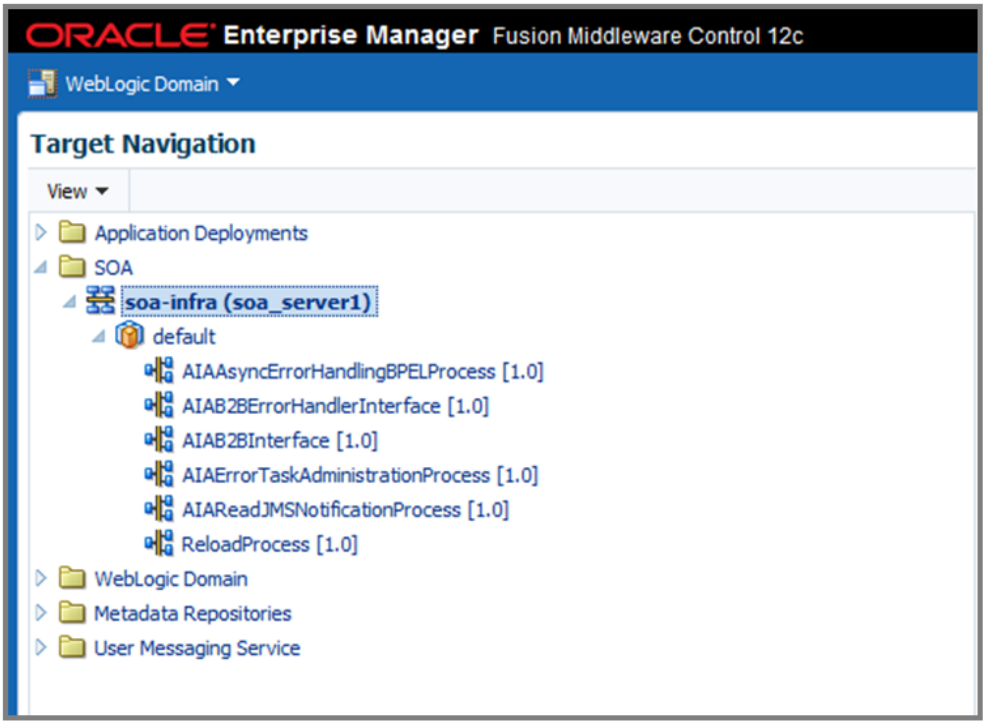
   ```
   cd /u01/app/oracle/product/fmw/oracle_common/common/bin  ./
   config.sh
   Jar name: /u01/MWSOA12210/Oracle_Home/soa/common/templates/wls/
   oracle.soa.fp_template.jar
   ```

   Accept the defaults while performing this step. After a successful upgrade, restart the server for the changes to be effective.



2. Verify that the SOA Core Extension is installed successfully.

- Check the EM Console to ensure the required error handling artifacts that are included by default as part of SOA Core Extension are deployed successfully.



- Login to the WebLogic admin console and validate the presence of the following:
  - AIAJMSServer (Home > JMS Servers)
  - AIAJMSModule(Home > JMS Modules)
  - AIADataStore (Home > Persistent Stores)

Note: If the EM Console and the WebLogic console do not have the listed composites, verify that the SOA Core Extension template has been successfully applied to the WebLogic domain.

3. Update the AIAInstallProperties.xml.

   Update the SOA server details, PIPs, and participating applications details.

   Refer to the AIAInstallProperties.xml template that is part of the FieldworkPIP.zipfile downloaded from Oracle Software Delivery Cloud (https://edelivery.oracle.com/) under templates folder for reference.

Properties

Name	Description
aiaDomain	Contains the domain information.
fp	Contains the FP information that needs to be configured.
pips	Contains the SOA server details, DB information required for the 12.2 PIP.
participatingapplications	Contains the participating applications information.

AIADomain

Name	Example	Description
sharedlocation	shared directories	This shared directory must be accessible to all nodes of cluster.
isencrypted	false or true	Default = False. Will be modified to true after the SERVICES_LOCATION gets generated in later steps. **Do not modify.**

FP

Name	Example	Description
fp		Root element that contains fp server information.
version	12.2.1.0.0	Version of FP. Populated by default.
adminhostname	SOAHost.domain.com	Admin server host name
adminport	7001	Admin server port.
domainname	soa_domain	SOA domain name
username	weblogic	Admin user name
password	weblogic1	Admin password
servertype	Server or Cluster	Enter Server or Cluster based on your topology.
soaserver	soa_server1 or soa_cluster	SOA managed server name or Cluster name
soaserverhostname	SOAHOST.domain.com	SOA server host name or Load balancer host name
soaserverport	8001	SOA server port name or Load balance port no
jndiurl	t3:// host.yourdomain:8001	Complete SOA server T3 protocol

PIPs

Name	Example	Description
FieldWork		
version	12.2	Version of the PIP
server		
adminhostname	SOAHost.domain.com	Admin server host name
adminport	7001	Admin server port.

Name	Example	Description
username	weblogic	Admin user name
password	weblogic1	Admin password
domainname	soa_domain	SOA domain name
servertype	Server or Cluster	Value should be set to Server or Cluster based on the topology.
soaserver	soa_server1 or soa_cluster	SOA managed server name
soaserverhostname	SOAHOST.domain.com	SOA managed server host name
soaserverport	8001	SOA managed server port no
db		Needs to be configured with the DB information of SOA and CC&B.
soadb		SOA DB information
jdbc-url	jdbc:oracle:thin:@//SOADB_HOST.domain.com:SOADB_PORT_NO/SOA_DB_SID	SOA DB JDBC URL
sysusername	sys	SOA DB sys user
syspassword	XXX	SOA DB sys password
aiands		SOA DB information to be used for nds user schema creation
jdbc-url	jdbc:oracle:thin:@//SOADB_HOST.domain.com:SOADB_PORT_NO/SOA_DB_SID	JDBC URL
username	AIA_OUCCB_NDS_USER	NDS user schema
password	mpluser	NDS user password
ccbnds		CC&B DB information used for NDS processing
jdbc-url	jdbc:oracle:thin:@//CCBDBHOST.domain.com:CCBDB_PORT_NO/CCB_DB_SID	CC&B JDBC URL
username	cisadm	CC&B DB user
password	XXX	CC&B DB password

Participating Applications

Name	Example	Description
participatingapplications		Contains all three edge application environment information.
mwm		Contains the MWM application information.
service		.
url	http:// MWM_HOST:MWM_PORT_NO/ CONTEXT_ROOT/XAIApp/ xaiserver/ (or) http:// MWM_HOST:MWM_PORT_NO/ CONTEXT_ROOT/webservices/	MWM service URL IWS or XAI
username	SYSUSER	User name for accessing the MWM services.
password	XXXX	Password for accessing the MWM services.
wam		Contains the WAM application information.
service		
url	https:// WAM_HOST:WAM_PORT_NO/ CONTEXT_ROOT/XAIApp/ xaiserver/ or https:// WAM_HOST:WAM_PORT_NO/ CONTEXT_ROOT/webservices/ for WAM v2.x (or) http:// WAM_HOST:WAM_PORT_NO/ CONTEXT_ROOT/synergen/ services/ for WAM v1.x	WAM service URL.
version	1 or 2	WAM application version.
username	SYSUSER or synergen	User name for accessing the WAM services.
password	XXXX	Password for accessing the WAM services.
ccb		Contains the CC&B application information.
exists	Y or N	Indicates whether or not CC&B exists.

Name	Example	Description
service		
url	https:// CCB_HOST:CCB_PORT_NO/ CONTEXT_ROOT/webservices/ (or) https:// CCB_HOST:CCB_PORT_NO/ CONTEXT_ROOT/XAIApp/ xaiserver/	CC&B service URL.
javaiws		
url	https:// CCB_HOST:CCB_PORT_NO/ CONTEXT_ROOT/webservices/ xla/ (or) https:// CCB_HOST:CCB_PORT_NO/ CONTEXT_ROOT/XAIApp/ xaiserver/	Configure CCB Java service URL (javaiws) in case of IWS service or XAI URL if not using IWS.
username	SYSUSER	User name for accessing the CC&B services.
password	XXXX	Password for accessing the CC&B services.

Note: Set the CC&B Exists and WAM Version values in AIAInstallProperties.xml based on the installation scenario:

Scenario	CC&B Exists Flag	WAM Version
Scenario 1: Integration + CC&B + MWM + WAMv1.x	Y	1
Scenario 2: Integration + CC&B + MWM	Y	2
Scenario 3: Integration + WAM v1.x + MWM	N	1
Scenario 4: Integration + WAM v1.x + CC&B	Y	1
Scenario 5: Integration + WAM/ODM v2.x + MWM	N	2
Scenario 6: Integration + WAM/ODM v2.x + CCB	Y	2
Scenario 7: Integration + WAM/ODM v2.x + CCB+ MWM	Y	2

4. Generate the SERVICES_LOCATION.

   Execute FPPostInstall.xml to generate the SERVICES_LOCATION which will be used as PRODUCT_HOME for FW-PIP 12.2.

Set the environment variables by executing aiaenv.bat/aiaenv.sh.

Windows:

```
Call
C:\Oracle\Middleware\Oracle_Home\user_projects\domains\soa_doma
in\soa\aia\bin\aiaenv.bat
```

Linux:

```
source /Oracle/Middleware/user_projects/domains/soa_domain/soa/
aia/bin/aiaenv.sh
```

Execute the FPPostInstall.xml using below command which prompts for the SERVICES_LOCATION.

Enter the path where you want to create your SERVICES_LOCATION.

Note: Make sure that the SERVICES_LOCATION directory does not exist. In case of a cluster, make sure this shared directory is accessible to all nodes.

Windows:

```
c:\>ant -f %SOA_HOME%\aiafp\Install\config\FPPostInstall.xml

Buildfile:
C:\Oracle\Middleware\Oracle_Home\soa\aiafp\Install\config\FPPos
tInstall.xml
-setProjectDirByUserInput:
         [input]Please enter the SCE Services Location:
C:\Oracle\SERVICES_LOCATION
```

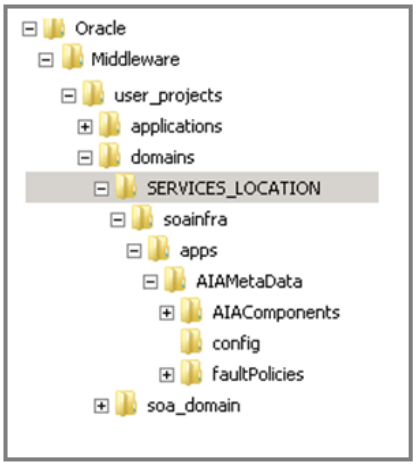
Linux:

```
bash-4.1$ ant -f $SOA_HOME/aiafp/Install/config/
FPPostInstall.xml
Buildfile: /scratch/12c/Oracle/Middleware/Oracle_Home/soa/
aiafp/Install/config/FPPostInstall.xml

-setProjectDirByUserInput:
[input]Please enter the SCE Services Location:
/u01/SERVICES_LOCATION
```

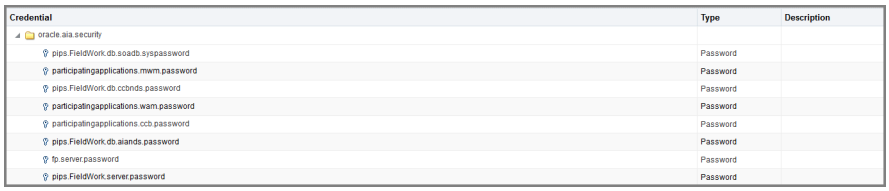
This initiates a prompt for a user name and password. Enter these details to complete the build then verify that the build was successful.

- The following directory structure is created on the server. SERVICES_LOCATION:



5. Login to the EM Console and validate that the following credential map and key are created successfully.

   - Right-click the soa_domain (domain name) 'Security 'Credentials.



   All passwords are encrypted in the AIAInstallProperties.xml. This happens automatically as part of generating SERVICES_LOCATION.

Installation

Complete the following installation steps:

1. Download the **FieldworkPIP.zip** file from Oracle Software Delivery Cloud. (https://edelivery.oracle.com).

   Note: For specific instructions about installing this integration on non-Windows/ Linux platforms, see Oracle Support Knowledge Article ID 1349320.1.

2. Extract the zip file to SERVICES_LOCATION. Example: /u01/SERVICES_LOCATION/soainfra/apps

   Note: Ensure that you have the write permissions and override the files during extraction. Unzip in such a a way that it should merge the contents of existing directory structure of SERVICES_LOCATION/soainfra/apps/../../../../till the child by installation zip (FieldworkPIP.zip)

   Example:

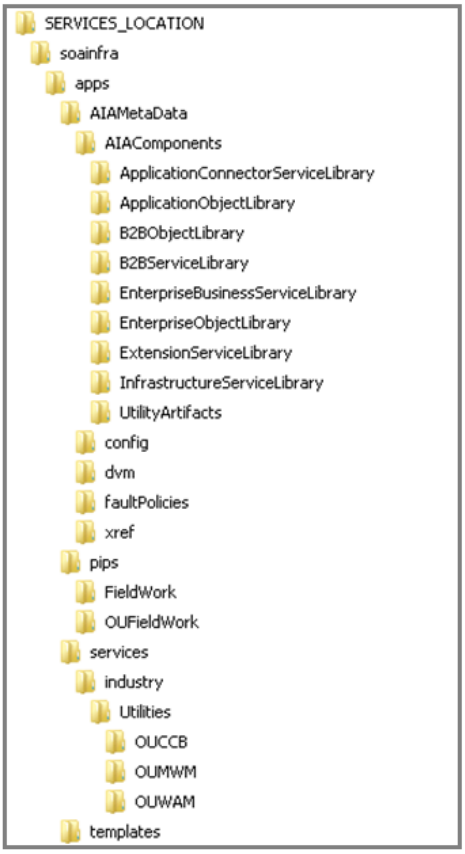
   Linux :

   ```
   $ unzip FieldworkPIP.zip
   ```

When unzip finds a file that already exists in the destination (SERVICES_LOCATION/soainfra/apps/../../../../) , it asks if you want to overwrite it. You can then type y to overwrite it, A to overwrite all files.

When you unzip the following directories will be merged into SERVICES_LOCATION/soainfra/apps.

The extracted folder structure on the server should appear as:



Installing the Integration

1. Source the environment variables using aiaenv.bat/aiaenv.sh.

   Windows:

   ```
   C:\Oracle\Middleware\Oracle_Home\user_projects\domains\soa_doma
   in\soa\aia\bin\aiaenv.bat
   ```

   Linux:

   ```
   source
   /Oracle/Middleware/user_projects/domains/soa_domain/soa/aia/
   bin/aiaenv.sh
   ```

2. Open a command prompt and execute the following installation command in Linux or Windows respectively.

Linux:

```
ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
FieldWorkDP.xml -DPropertiesFile=$DOMAIN_LOCATION/soa/aia/bin/
AIAInstallProperties.xml - DSupplementaryDeploymentPlan=$AIA_HOME/
pips/FieldWork/ DeploymentPlans/FieldWorkSupplementaryDP.xml -
DDeploymentPolicyFile=$AIA_HOME/pips/FieldWork/DeploymentPlans/
FieldWorkConditionalPolicy.xml -l $AIA_HOME/pips/FieldWork/
DeploymentPlans/FieldWorkDP.log
```

Windows:

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\FieldWor
kDP.xml -
DPropertiesFile=%DOMAIN_LOCATION%\soa\aia\bin\AIAInstallProperties
.xml -
DSupplementaryDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentP
lans\FieldWorkSupplementaryDP.xml -
DDeploymentPolicyFile=%AIA_HOME%\pips\FieldWork\DeploymentPlans\Fi
eldWorkConditionalPolicy.xml -l
%AIA_HOME%\pips\FieldWork\DeploymentPlans\FieldWorkDP.log
```

This initiates a prompt for the WebLogic admin user name and password. Enter these details to initiate the installation.

Post-Installation Validation

After completing the installation steps, use the following guidelines to validate based on your planned integration combination.

Installation Validation for Scenario 1, Scenario 2 and Scenario 4

- Scenario 1: Integration + CC&B, MWM + WAMv1.x
- Scenario 2: Integration + CC&B + MWM
- Scenario 4: Integration + WAM v1.x + CC&B

1. Login to the Enterprise Manager console.
2. Navigate to **SOA** > **soa-infra** > **default partition**.
3. Verify that all composites are deployed and are in 'active' state. Following is a list of composites:
   - AIAAsyncErrorHandlingBPELProcess
   - AIAB2BErrorHandlerInterface
   - AIAB2BInterface
   - AIAErrorTaskAdministrationProcess
   - AIAReadJMSNotificationProcess
   - CCBGetMeterDataProvService
   - CreateCustomerInteractionOUCCBUtilitiesProvABCSImpl
   - CreateCustomerInteractionOUWAMUtilitiesReqABCSImpl

- CreateInvoiceOUCCBUtilitiesJMSConsumer
- CreateInvoiceOUCCBUtilitiesJMSProducer
- CreateInvoiceOUCCBUtilitiesProvABCSImpl
- CreateInvoiceOUWAMUtilitiesReqABCSImpl
- CreateTimeSheetOUWAMUtilitiesProvABCSImpl
- GetNDSRecordsOUCCBUtilitiesEBF
- GetWOLineApptWinAvailOUCCBUtilitiesReqABCSImpl
- GetWOLineApptWinAvailOUMWMUtilitiesProvABCSImplV2
- ManageNDSRecordsUtilityEBF
- ProcessNDSRecordOUCCBUtilitiesEBF
- ProcessWorkOrderCompleteOUMWMUtilitiesReqABCSImplV2
- ProcessWorkOrderCompleteOUWAMUtilitiesReqABCSImpl
- ProcessWorkOrderCreateOUMWMUtilitiesReqABCSImplV2
- ProcessWorkOrderCreateOUWAMUtilitiesReqABCSImpl
- ProcessWorkOrderOUCCBUtilitiesJMSConsumer
- ProcessWorkOrderOUCCBUtilitiesJMSProducer
- ProcessWorkOrderOUCCBUtilitiesProvABCSImpl
- ProcessWorkOrderOUCCBUtilitiesReqABCSImpl
- ProcessWorkOrderOUMWMUtilitiesJMSConsumerV2
- ProcessWorkOrderOUMWMUtilitiesJMSProducer
- ProcessWorkOrderOUMWMUtilitiesProvABCSImplV2
- ProcessWorkOrderOUWAMUtilitiesJMSConsumer
- ProcessWorkOrderOUWAMUtilitiesJMSProducer
- ProcessWorkOrderOUWAMUtilitiesProvABCSImpl
- ProcessWorkOrderResponseOUCCBUtilitiesJMSConsumer
- ProcessWorkOrderResponseOUCCBUtilitiesJMSProducer
- ProcessWorkOrderResponseOUCCBUtilitiesProvABCSImpl
- ProcessWorkOrderResponseOUMWMUtilitiesProvABCSImplV2
- ProcessWorkOrderResponseOUWAMUtilitiesProvABCSImpl
- ProcessWorkOrderStatusOUMWMUtilitiesReqABCSImplV2
- ProcessWorkOrderUpdateOUWAMUtilitiesReqABCSImpl
- QueryInstalledProductListOUCCBUtilitiesProvABCSImpl
- QueryInstalledProductListOUMWMUtilitiesReqABCSImplV2
- ReloadProcess
- UtilitiesCustomerInteractionEBS
- UtilitiesCustomerInteractionResponseEBS

- UtilitiesInstalledProductEBSV2
- UtilitiesInvoiceEBSV2
- UtilitiesWorkOrderEBS
- UtilitiesWorkOrderResponseEBS
- ValidateInstalledProductOUCCBUtilitiesProvABCSImpl
- ValidateInstalledProductOUMWMUtilitiesReqABCSImplV2
- ValidateInstalledProductOUWAMUtilitiesReqABCSImpl
- WAMGetMeterDataReqService

4. Login to the WebLogic admin console to validate.
   - JMS queues and connection factories related to this integration are created under **Home** > **JMS Modules** > **AIAJMSModule**.
     - AIA_OUCCBFAResponseJMSQueue
     - AIA_OUCCBFAResponseJMSQueue_ErrorQ
     - AIA_OUCCBInvoiceJMSQueue
     - AIA_OUCCBInvoiceJMSQueue_ErrorQ
     - AIA_OUCCBOUODMSPSyncReqQueue
     - AIA_OUCCBOUODMSPSyncReqQueue_ErrorQ
     - AIA_OUCCBWorkOrderJMSQueue
     - AIA_OUCCBWorkOrderJMSQueue_ErrorQ
     - AIA_OUMWMWorkOrderJMSQueue
     - AIA_OUMWMWorkOrderJMSQueue_ErrorQ
     - AIA_OUODMOUCCBSPSyncRespQueue
     - AIA_OUODMOUCCBSPSyncRespQueue_ErrorQ
     - AIA_OUWAMWorkOrderJMSQueue
     - AIA_OUWAMWorkOrderJMSQueue_ErrorQ
     - AIA_OUWAMAckResponseJMSQueue
     - AIA_OUWAMAckResponseJMSQueue_ErrorQ
     - AIAOUCCBCF
     - AIAOUMWMCF
     - AIAOUWAMCF
   - Datasources related to integration are created under **Home** > **Data Sources**. This is applicable only if Oracle Utilities Customer Care and Billing is included in your integration.
     - AIANDSDS
     - AIAOUCCBNDSDS
5. Verify that the csf-keys are created successfully.
   a. Login to the Enterprise Manager console.
   b. Navigate to **WebLogic_Domain** > **soa_domain**.

c. Right-click **soa_domain**, and then select **Security** > **Credentials**.

d. Expand the **oracle.wsm.security** map.

e. Verify that the following keys are available:

- OU_CCB_01
- OU_MWM_01
- OU_WAM_01
- FW_PIP_01

The AIA_OUCCB_NDS_USER is created in the SOA database. The credentials for this user can be obtained from the AIAInstallProperties.xml file aiands node.

6. Verify the installation logs for any errors.
7. Get the configuration file from MDS using the GetFieldWorkConfigFileDP.xml utility and validate all the module level properties, service level properties are present in the AIAConfigurationProperties.xml.

Installation Validation for Scenario 3

- Integration + WAM v1.x + MWM

1. Login to the Enterprise Manager console.
2. Navigate to the **SOA** > **soa-infra** > **default partition**.
3. Verify that all composites are deployed and are in 'active' state. Following is a list of composites:
   - AIAAsyncErrorHandlingBPELProcess
   - AIAB2BErrorHandlerInterface
   - AIAB2BInterface
   - AIAErrorTaskAdministrationProcess
   - AIAReadJMSNotificationProcess
   - CCBGetMeterDataProvService
   - CreateCustomerInteractionOUCCBUtilitiesProvABCSImpl
   - CreateCustomerInteractionOUWAMUtilitiesReqABCSImpl
   - CreateInvoiceOUCCBUtilitiesJMSConsumer
   - CreateInvoiceOUCCBUtilitiesJMSProducer
   - CreateInvoiceOUCCBUtilitiesProvABCSImpl
   - CreateInvoiceOUWAMUtilitiesReqABCSImpl
   - CreateTimeSheetOUWAMUtilitiesProvABCSImpl
   - GetWOLineApptWinAvailOUCCBUtilitiesReqABCSImpl
   - GetWOLineApptWinAvailOUMWMUtilitiesProvABCSImplV2
   - OUCCBOUODMSPSyncReqEBF
   - OUODMOUCCBSPSyncRespEBF
   - ProcessWorkOrderCompleteOUMWMUtilitiesReqABCSImplV2

- ProcessWorkOrderCompleteOUWAMUtilitiesReqABCSImpl
- ProcessWorkOrderCreateOUMWMUtilitiesReqABCSImplV2
- ProcessWorkOrderCreateOUWAMUtilitiesReqABCSImpl
- ProcessWorkOrderOUCCBUtilitiesJMSConsumer
- ProcessWorkOrderOUCCBUtilitiesJMSProducer
- ProcessWorkOrderOUCCBUtilitiesProvABCSImpl
- ProcessWorkOrderOUCCBUtilitiesReqABCSImpl
- ProcessWorkOrderOUMWMUtilitiesJMSConsumerV2
- ProcessWorkOrderOUMWMUtilitiesJMSProducer
- ProcessWorkOrderOUMWMUtilitiesProvABCSImplV2
- ProcessWorkOrderOUWAMUtilitiesJMSConsumer
- ProcessWorkOrderOUWAMUtilitiesJMSProducer
- ProcessWorkOrderOUWAMUtilitiesProvABCSImpl
- ProcessWorkOrderResponseOUCCBUtilitiesJMSConsumer
- ProcessWorkOrderResponseOUCCBUtilitiesJMSProducer
- ProcessWorkOrderResponseOUCCBUtilitiesProvABCSImpl
- ProcessWorkOrderResponseOUMWMUtilitiesProvABCSImplV2
- ProcessWorkOrderResponseOUWAMUtilitiesProvABCSImpl
- ProcessWorkOrderStatusOUMWMUtilitiesReqABCSImplV2
- ProcessWorkOrderUpdateOUWAMUtilitiesReqABCSImpl
- QueryInstalledProductListOUCCBUtilitiesProvABCSImpl
- QueryInstalledProductListOUMWMUtilitiesReqABCSImplV2
- ReloadProcess
- UtilitiesCustomerInteractionEBS
- UtilitiesCustomerInteractionResponseEBS
- UtilitiesInstalledProductEBSV2
- UtilitiesInvoiceEBSV2
- UtilitiesWorkOrderEBS
- UtilitiesWorkOrderResponseEBS
- ValidateInstalledProductOUCCBUtilitiesProvABCSImpl
- ValidateInstalledProductOUMWMUtilitiesReqABCSImplV2
- ValidateInstalledProductOUWAMUtilitiesReqABCSImpl
- WAMGetMeterDataReqService

4. Login to the weblogic admin console to validate the following.
   - JMS queues and connection factories related to this integration are created under **Home** > **JMS Modules** > **AIAJMSModule**.

- AIA_OUCCBFAResponseJMSQueue
- AIA_OUCCBFAResponseJMSQueue_ErrorQ
- AIA_OUCCBOUODMSPSyncReqQueue
- AIA_OUCCBOUODMSPSyncReqQueue_ErrorQ
- AIA_OUMWMWorkOrderJMSQueue
- AIA_OUMWMWorkOrderJMSQueue_ErrorQ
- AIA_OUODMOUCCBSPSyncRespQueue
- AIA_OUODMOUCCBSPSyncRespQueue_ErrorQ
- AIA_OUWAMWorkOrderJMSQueue
- AIA_OUWAMWorkOrderJMSQueue_ErrorQ
- AIA_OUWAMAckResponseJMSQueue
- AIA_OUWAMAckResponseJMSQueue_ErrorQ
- AIAOUCCBCF
- AIAOUMWMCF
- AIAOUWAMCF

5. Verify that the csf-keys are created successfully.
   a. Login to the Enterprise Manager console.
   b. Navigate to **WebLogic_Domain** > **soa_domain** > **soa_domain**.
   c. Right-click **soa_domain**, and then select **Security** > **Credentials**.
   d. Expand the **oracle.wsm.security** map.
   e. Verify that the following keys are available:
      - OU_CCB_01
      - OU_MWM_01
      - OU_WAM_01
      - FW_PIP_01

The AIA_OUCCB_NDS_USER user is created in the SOA database. The credentials for this user can be obtained from the AIAInstallProperties.xml file aiands node.

6. Verify the installation logs for any errors.
7. Get the configuration file from MDS using the GetFieldWorkConfigFileDP.xml utility and validate all the module level properties, service level properties are present in the AIAConfigurationProperties.xml.

Installation Validation for Scenario 5

- Integration + WAM v2.x + MWM

After the successful installation of the PIP for WAMV2-MWM the following composites will be successfully deployed and can be validated in the Enterprise Manageer Console.

1. Login to the Enterprise Manager console.
2. Navigate to the **SOA** > **soa-infra** > **default partition**.

3. Verify that all composites are deployed and are in 'active' state. Following is the list of composites:
    - AIAAsyncErrorHandlingBPELProcess
    - AIAB2BErrorHandlerInterface
    - AIAB2BInterface
    - AIAErrorTaskAdministrationProcess
    - AIAReadJMSNotificationProcess
    - CCBGetMeterDataProvService
    - CreateCustomerInteractionOUCCBUtilitiesProvABCSImpl
    - CreateInvoiceOUCCBUtilitiesJMSConsumer
    - CreateInvoiceOUCCBUtilitiesJMSProducer
    - CreateInvoiceOUCCBUtilitiesProvABCSImpl
    - GetWOLineApptWinAvailOUCCBUtilitiesReqABCSImpl
    - GetWOLineApptWinAvailOUMWMUtilitiesProvABCSImplV2
    - OUCCBOUODMSPSyncReqEBF
    - OUODMOUCCBSPSyncRespEBF
    - ProcessWorkOrderCancelCompleteOUWAMUtilitiesReqABCSImplV2
    - ProcessWorkOrderCompleteOUMWMUtilitiesReqABCSImplV2
    - ProcessWorkOrderCreateOUMWMUtilitiesReqABCSImplV2
    - ProcessWorkOrderCreateUpdateOUWAMUtilitiesReqABCSImplV2
    - ProcessWorkOrderOUCCBUtilitiesJMSConsumer
    - ProcessWorkOrderOUCCBUtilitiesJMSProducer
    - ProcessWorkOrderOUCCBUtilitiesProvABCSImpl
    - ProcessWorkOrderOUCCBUtilitiesReqABCSImpl
    - ProcessWorkOrderOUMWMUtilitiesJMSConsumerV2
    - ProcessWorkOrderOUMWMUtilitiesJMSProducer
    - ProcessWorkOrderOUMWMUtilitiesProvABCSImplV2
    - ProcessWorkOrderOUWAMUtilitiesJMSConsumerV2
    - ProcessWorkOrderOUWAMUtilitiesJMSProducer
    - ProcessWorkOrderOUWAMUtilitiesProvABCSImplV2
    - ProcessWorkOrderResponseOUCCBUtilitiesJMSConsumer
    - ProcessWorkOrderResponseOUCCBUtilitiesJMSProducer
    - ProcessWorkOrderResponseOUCCBUtilitiesProvABCSImpl
    - ProcessWorkOrderResponseOUMWMUtilitiesProvABCSImplV2
    - ProcessWorkOrderResponseOUWAMUtilitiesJMSConsumerV2
    - ProcessWorkOrderResponseOUWAMUtilitiesJMSProducerV2

- ProcessWorkOrderResponseOUWAMUtilitiesProvABCSImplV2
- ProcessWorkOrderStatusOUMWMUtilitiesReqABCSImplV2
- QueryInstalledProductListOUCCBUtilitiesProvABCSImpl
- QueryInstalledProductListOUMWMUtilitiesReqABCSImplV2
- ReloadProcess
- UtilitiesInstalledProductEBSV2
- UtilitiesWorkOrderEBS
- UtilitiesWorkOrderResponseEBS
- ValidateInstalledProductOUCCBUtilitiesProvABCSImpl
- ValidateInstalledProductOUMWMUtilitiesReqABCSImplV2

4. Login to the weblogic admin console to validate. JMS queues and connection factories related to this integration are created under **HOME** > **JMS Modules** > **AIAJMSModule**.
   - AIA_OUCCBFAResponseJMSQueue
   - AIA_OUCCBFAResponseJMSQueue_ErrorQ
   - AIA_OUCCBInvoiceJMSQueue
   - AIA_OUCCBInvoiceJMSQueue_ErrorQ
   - AIA_OUCCBOUODMSPSyncReqQueue
   - AIA_OUCCBOUODMSPSyncReqQueue_ErrorQ
   - AIA_OUCCBWorkOrderJMSQueue
   - AIA_OUCCBWorkOrderJMSQueue_ErrorQ
   - AIA_OUMWMWorkOrderJMSQueue
   - AIA_OUMWMWorkOrderJMSQueue_ErrorQ
   - AIA_OUODMOUCCBSPSyncRespQueue
   - AIA_OUODMOUCCBSPSyncRespQueue_ErrorQ
   - AIA_OUWAMWorkOrderJMSQueue
   - AIA_OUWAMWorkOrderJMSQueue_ErrorQ
   - AIA_OUWAMAckResponseJMSQueue
   - AIA_OUWAMAckResponseJMSQueue_ErrorQ
5. Verify that the csf-keys are created successfully.
   a. Login to the Enterprise Manager console.
   b. Navigate to **WebLogic_Domain** > **soa_domain**.
   c. Right-click **soa_domain**, and then select **Security** > **Credentials**.
   d. Expand the **oracle.wsm.security** map.
   e. Verify that the following keys are available:
      - OU_CCB_01
      - OU_MWM_01

- OU_WAM_01
- FW_PIP_01

The AIA_OUCCB_NDS_USER user is created in the SOA database. The credentials for this user can be obtained from the AIAInstallProperties.xml file aiands node.

6. Verify the installation logs for any errors.
7. Get the configuration file from MDS using the GetFieldWorkConfigFileDP.xml utility and validate all the module level properties, service level properties are present in the AIAConfigurationProperties.xml.

Installation Validation for Scenario 6 and Scenario 7

- Scenario 6: Integration + WAM v2.x + CCB
- Scenario 7: Integration + WAM v2.x + CCB + MWM

1. Login to the Enterprise Manager console.
2. Navigate to the **SOA** > **soa-infra** > **default partition**.
3. Verify that all composites are deployed and are in 'active' state. Following is the list of composites:
   - AIAAsyncErrorHandlingBPELProcess
   - AIAB2BErrorHandlerInterface
   - AIAB2BInterface
   - AIAErrorTaskAdministrationProcess
   - AIAReadJMSNotificationProcess
   - CCBGetMeterDataProvService
   - CreateCustomerInteractionOUCCBUtilitiesProvABCSImpl
   - CreateInvoiceOUCCBUtilitiesJMSConsumer
   - CreateInvoiceOUCCBUtilitiesJMSProducer
   - CreateInvoiceOUCCBUtilitiesProvABCSImpl
   - GetNDSRecordsOUCCBUtilitiesEBF
   - GetWOLineApptWinAvailOUCCBUtilitiesReqABCSImpl
   - GetWOLineApptWinAvailOUMWMUtilitiesProvABCSImplV2
   - ManageNDSRecordsUtilityEBF
   - OUCCBOUODMSPSyncReqEBF
   - OUODMOUCCBSPSyncRespEBF
   - ProcessNDSRecordOUCCBUtilitiesEBF
   - ProcessWorkOrderCancelCompleteOUWAMUtilitiesReqABCSImplV2
   - ProcessWorkOrderCompleteOUMWMUtilitiesReqABCSImplV2
   - ProcessWorkOrderCreateOUMWMUtilitiesReqABCSImplV2
   - ProcessWorkOrderCreateUpdateOUWAMUtilitiesReqABCSImplV2
   - ProcessWorkOrderOUCCBUtilitiesJMSConsumer

- ProcessWorkOrderOUCCBUtilitiesJMSProducer
- ProcessWorkOrderOUCCBUtilitiesProvABCSImpl
- ProcessWorkOrderOUCCBUtilitiesReqABCSImpl
- ProcessWorkOrderOUMWMUtilitiesJMSConsumerV2
- ProcessWorkOrderOUMWMUtilitiesJMSProducer
- ProcessWorkOrderOUMWMUtilitiesProvABCSImplV2
- ProcessWorkOrderOUWAMUtilitiesJMSConsumerV2
- ProcessWorkOrderOUWAMUtilitiesJMSProducer
- ProcessWorkOrderOUWAMUtilitiesProvABCSImplV2
- ProcessWorkOrderResponseOUCCBUtilitiesJMSConsumer
- ProcessWorkOrderResponseOUCCBUtilitiesJMSProducer
- ProcessWorkOrderResponseOUCCBUtilitiesProvABCSImpl
- ProcessWorkOrderResponseOUMWMUtilitiesProvABCSImplV2
- ProcessWorkOrderResponseOUWAMUtilitiesJMSConsumerV2
- ProcessWorkOrderResponseOUWAMUtilitiesJMSProducerV2
- ProcessWorkOrderResponseOUWAMUtilitiesProvABCSImplV2
- ProcessWorkOrderStatusOUMWMUtilitiesReqABCSImplV2
- QueryInstalledProductListOUCCBUtilitiesProvABCSImpl
- QueryInstalledProductListOUMWMUtilitiesReqABCSImplV2
- ReloadProcess
- UtilitiesInstalledProductEBSV2
- UtilitiesWorkOrderEBS
- UtilitiesWorkOrderResponseEBS
- ValidateInstalledProductOUCCBUtilitiesProvABCSImpl
- ValidateInstalledProductOUMWMUtilitiesReqABCSImplV2

4. Login to the WebLogic admin console to validate. JMS queues and connection factories related to this integration are created under **HOME** > **JMS Modules** > **AIAJMSModule**.
   - AIA_OUCCBFAResponseJMSQueue
   - AIA_OUCCBFAResponseJMSQueue_ErrorQ
   - AIA_OUCCBInvoiceJMSQueue
   - AIA_OUCCBInvoiceJMSQueue_ErrorQQueue
   - AIA_OUCCBOUODMSPSyncReqQueue
   - AIA_OUCCBOUODMSPSyncReqQueue_ErrorQ
   - AIA_OUCCBWorkOrderJMSQueue
   - AIA_OUCCBWorkOrderJMSQueue_ErrorQ
   - AIA_OUMWMWorkOrderJMSQueue

- AIA_OUMWMWorkOrderJMSQueue_ErrorQ
- AIA_OUODMOUCCBSPSyncRespQueue
- AIA_OUODMOUCCBSPSyncRespQueue_ErrorQ
- AIA_OUWAMAckResponseJMSQueue
- AIA_OUWAMAckResponseJMSQueue_ErrorQ
- AIA_OUWAMWorkOrderJMSQueue
- AIA_OUWAMWorkOrderJMSQueue_ErrorQ

5. Verify that the csf-keys are created successfully.
   a. Login to the Enterprise Manager console.
   b. Navigate to **WebLogic_Domain** > **soa_domain**.
   c. Right-click **soa_domain**, and then select **Security** > **Credentials**.
   d. Expand the **oracle.wsm.security** map.
   e. Verify that the following keys are available:
      - OU_CCB_01
      - OU_MWM_01
      - OU_WAM_01
      - FW_PIP_01

The AIA_OUCCB_NDS_USER user is created in the SOA database. The credentials for this user can be obtained from the AIAInstallProperties.xml file aiands node.

6. Verify the installation logs for any errors.
7. Get the configuration file from MDS using the GetFieldWorkConfigFileDP.xml utility and validate all the module level properties, service level properties are present in the AIAConfigurationProperties.xml.

Configuring Edge Applications

Configure the edge applications according to the guidelines in the Oracle Process Integration Pack for Oracle Utilities Field Work Implementation Guide. For customers on cluster set up ensure that to set the Server URL and Callback Server URL pointing to Load Balancer in "SOA Infrastructure common properties" in em console.

Post Installation Requirement for Scenario 1, Scenario 2, Scenario 4, Scenario 6 and Scenario 7

By default, the field activities from Oracle Utilities Customer Care and Billing will not be picked up. The polling composite, GetNDSRecordsOUCCBUtilitiesEBF, does not poll the NDS records since STATUS in the table OUCCB_NDS_PROCESS_ACTIVATION is set to Stopped.

Once all the integration configurations are completed, the polling can be started by running the composite ManageNDSRecordsUtilityEBF helpful in managing NDS processing or the table can also be updated manually.

Execute the following SQL command:

```
"update OUCCB_NDS_PROCESS_ACTIVATION set STATUS='Ready';"
```

in the schema AIA_OUCCB_NDS_USER created as part of this product installation.

Using the ManageNDSRecordsUtilityEBF:

This composite is used to Start/Stop or check the status of the polling. Enter Details as needed:

- **Start**: Starts the NDS processing
- **Stop**: Stops NDS processing
- **Status**: Gives status of Status and enableProcess (Ex: Status:Stopped::Flag:Yes)

  Note: For processing NDS records ensure that the Status is set to "Ready" and enableProcess is set to "Yes".

Enterprise Business Objects (EBOs)

Utilities related EBOs are included as part of this integration product. These can be accessed from MDS in the following location:

```
apps\AIAMetaData\AIAComponents\EnterpriseObjectLibrary\Industry\Utilities
```

Chapter 3

Configuring Edge Application Security Certificates in WebLogic

To import and configure the security certificates (such as CCB, WAMV2, MWM certificates):

1. Export the edge application certificate and save it on the integration server to add it to the key store.

   Example: /Oracle/Middleware/Oracle_Home/user_projects/domains/SERVICES_LOCATION/ccbcert.cer

2. Create a new keystore (example: UtilitiesIntegration.jks) for importing the edge application certificates.

   Example:

   keytool -genkey -keystore /Oracle/Middleware/Oracle_Home/wlserver/server/lib/UtilitiesIntegration.jks -storepass xxxxxxx

3. Import the edge application certificates into the new trust store.

   Example:

   keytool -import -file /Oracle/Middleware/Oracle_Home/user_projects/domains/SERVICES_LOCATION/ccbcert.cer -alias RootCA -keystore /Oracle/Middleware/Oracle_Home/wlserver /server/lib/ UtilitiesIntegration.jks -storepass welcome1

4. Verify if the certificate is added to the store using the following command by listing the certificates.

   Example:

   keytool -list -v -keystore /Oracle/Middleware/Oracle_Home/wlserver/server/lib/UtilitiesIntegration.jks

   Enter the password when prompted.

5. Edit the file setDomainEnv.sh for Linux or setDomainEnv.cmd for Windows and replace the existing javax.net.ssl.trustStore property.

   This is located in ${WL_HOME}/ user_projects/domains/<domain_name>/bin.

6. Search for -Djavax.net.ssl.trustStore in the file and replace it with Djavax.net.ssl.trustStore=${WL_HOME}/server/lib/UtilitiesIntegration.jks -Djavax.net.ssl.trustStorePassword=xxxxxxx.

7. In the WebLogic console, navigate to **Home** > **Servers** > **soa_server1** > **Keystores** and configure the details.
8. Click **Lock & Edit** to change the keystore details.
9. Click **Change** and then select **Custom Identity and Java Standard Trust** from the drop-down list.
10. Enter the following values in the respective fields:

    Custom Identity Keystore: /Oracle/Middleware/Oracle_Home/wlserver/server/lib/UtilitiesIntegration.jks

    Custom Identity Keystore Type: jks

    Custom Identity Keystore Passphrase: welcome1

    Confirm Custom Identity Keystore Passphrase: welcome1
11. Click **Activate Changes** and bounce the managed server to bring the changes into effect.

    Note: In a clustered environment, managed servers need to have their own keystore configured.

Chapter 4

Custom Deployments

This chapter describes how to deploy and undeploy individual composites for incremental builds or patches.

Important! Before executing the following processes, make sure that the environment variables are set by sourcing aiaenv.bat/aiaenv.sh.

- Deploying/Undeploying Individual Composites
- Updating Configuration Properties/MDS
- NDS Artifacts Deployment

Deploying/Undeploying Individual Composites

Edit the FieldWorkCustomDP.xml file to deploy and undeploy composite files. Add as per the comments in the file and run the command accordingly.

Linux

```
ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
FieldWorkCustomDP.xml -DPropertiesFile=$DOMAIN_LOCATION/soa/aia/
bin/AIAInstallProperties.xml
```

Windows

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\Field
WorkCustomDP.xml -
DPropertiesFile=%DOMAIN_LOCATION%\soa\aia\bin\AIAInstallProperties
.xml
```

This process prompts for entering the admin user name and password. Enter these details to complete the process.

Updating Configuration Properties/MDS

Complete the following to update the configuration properties:

1. Download the configuration properties file from MDS using GetFieldWorkConfigFileDP.xml.

   Linux

   ```
   ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
   DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
   GetFieldWorkConfigFileDP.xml -DPropertiesFile=$DOMAIN_LOCATION/
   soa/aia/bin/AIAInstallProperties.xml
   ```

   Windows

   ```
   ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
   DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\GetFi
   eldWorkConfigFileDP.xml -
   DPropertiesFile=%DOMAIN_LOCATION%\soa\aia\bin\AIAInstallProperties
   .xml
   ```

   This process prompts for entering the admin host, port, user name and password. Enter these details to complete the process.

2. Edit the downloaded file in $AIA_HOME/config folder and make the modifications then run the UpdateFieldWorkConfigFileDP.xml utility provided.

   Linux

   ```
   ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
   DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
   UpdateFieldWorkConfigFileDP.xml -DPropertiesFile=$DOMAIN_LOCATION/
   soa/aia/bin/AIAInstallProperties.xml
   ```

Windows

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\Updat
eFieldWorkConfigFileDP.xml -
DPropertiesFile=%DOMAIN_LOCATION%\soa\aia\bin\AIAInstallProperties
.xml
```

This process prompts for entering the admin user name and password. Enter these details to complete the process.

NDS Artifacts Deployment

During the installation, if the integration does not include Oracle Utilities Customer Care and Billing, but the implementation adds the application later, you can use the FieldWorkNDSDP.xml utility to include the required artifacts for NDS processing using CC&B.

Linux

```
ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
FieldWorkNDSDP.xml -DPropertiesFile=$DOMAIN_LOCATION/soa/aia/bin/
AIAInstallProperties.xml
```

Windows

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\Field
WorkNDSDP.xml -
DPropertiesFile=%DOMAIN_LOCATION%\soa\aia\bin\AIAInstallProperties
.xml
```

This process prompts to enter the admin user name and password. Enter these details to complete the process.

Chapter 5

Uninstalling the Integration

This chapter focuses on the following:

- Uninstalling the Integration
- Validating the Uninstallation

Uninstalling the Integration

To uninstall the integration:

1. Make sure the following environment variables are set.

```
MW_HOME
SOA_HOME
ORACLE_HOME
WL_HOME
DOMAIN_LOCATION
PRODUCT_HOME
```

Below is an example to set up environment variables in a typical installation:

Linux

```
export MW_HOME=/xxx/Middleware1221/Oracle_Home
export SOA_HOME=/xxx/Middleware1221/Oracle_Home/soa
export ORACLE_HOME=/xxx/Middleware1221/Oracle_Home/soa
export WL_HOME=/xxx/Middleware1221/Oracle_Home/wlserver
export PRODUCT_HOME=/xxx/Middleware1221/PRODUCT_HOME/FieldworkPIP
export DOMAIN_LOCATION=/xxx/Middleware1221/Oracle_Home/
user_projects/domains/prod_domain
source "${WL_HOME}/server/bin/setWLSEnv.sh"
```

Windows

```
SET MW_HOME=C:\Oracle\Middleware\soa
SET SOA_HOME=%MW_HOME%\soa
SET ORACLE_HOME=%MW_HOME%\soa
SET DOMAIN_LOCATION=
C:\Oracle\Middleware\user_projects\domains\prod_domain
SET PRODUCT_HOME=C:\Product_Homes\FieldworkPIP
cd %MW_HOME%/wlserver/server/bin/
setWLSEnv.cmd
```

Note: The uninstallation process may take several minutes to complete.

Following are the scenarios supported in Fieldwork PIP. Ensure the correct scenario number is used when uninstalling some of the following commands below where DinputScenario number is required; otherwise the necessary artifacts will not be installed correctly.

- Scenario 1: Integration + CCB + MWM + WAMv1.x
- Scenario 2: Integration + CCB + MWM
- Scenario 3: Integration + WAM v1.x + MWM
- Scenario 4: Integration + WAM v1.x + CCB
- Scenario 5: Integration + WAM/ODM v2.x + MWM
- Scenario 6: Integration + CCB + WAM/ODM v2.x
- Scenario 7: Integration + CCB + WAM/ODM v2.x + MWM

2. Open a Command prompt and execute the following installation commands in the order listed below:

   a. UnInstallSOA

   - Removes the MDS repository with all artifacts.
   - Undeploys all composites.

```
ant -f UnInstallBuild.xml uninstallSOA -
DInstallProperties=$PRODUCT_HOME/config/
InstallProperties.xml -DinputScenario=7
```

Note: The scenario number 7 is an example here, use current the installation scenario applicable.

b. UnInstallWL

The UninstallWL commands perform the following tasks:

- Removes outbound connection pool instance for the database by undeploying the DbAdapter_FieldworkPIP.rar file.
- Removes JMS outbound connections by undeploying the JMSAdapter_FieldworkPIP.rar file.
- Removes JMS Connection Factories and queues.
- Removes the csf keys for Fieldwork PIP.

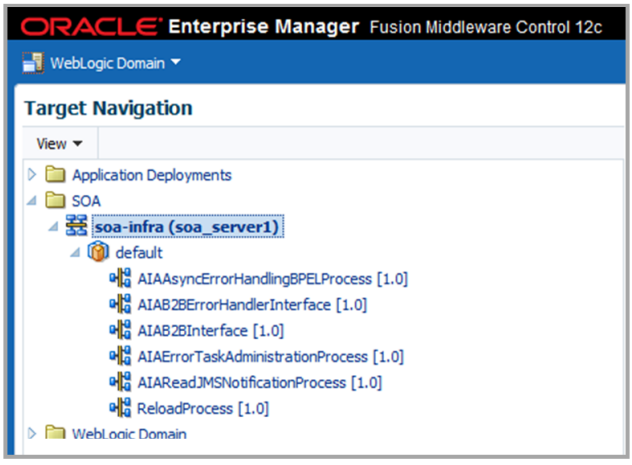
```
ant -f UnInstallBuild.xml uninstallWL -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -
DinputScenario=7
```

c. UnInstallDB - Removes NDS activation table and schema in SOA using schema specified in InstallProperties.xml.

```
ant -f UnInstallBuild.xml uninstallDB -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml
```

Validating the Uninstallation

Once the uninstallation is successfully completed, all of the composites should be removed from the Enterprise Manager console. Only the following composites that come as part of SCE in domain upgrade should remain:



- The credential map “oracle.wsm.security map” and keys “OU_CCB_01, OU_MWM_01, OU_WAM_01 and FW-PIP_01” created during installation should be deleted successfully.
- The JMS Queues and connection factories created during the installation from the weblogic console under **HOME** > **MS Modules** > **AIAJMSModule** should have been deleted.

- Data Sources related to your integration are removed and the user AIA_OUCCB_NDS_USER is dropped from the SOA database. This is applicable only if Oracle Utilities Customer Care and Billing is included as one of your edge application. Else, ignore.

Chapter 6

Troubleshooting

This chapter provides information on troubleshooting the integration. It includes the following:

AIAReadJMSNotificationProcessError

If the SOA version is 12.2.1 and the composite fails with the following error, deploy the composite AIAReadJMSNotificationProcess.

For instructions, refer to the Deploying/Undeploying Individual Composites section in Chapter 4: Custom Deployments.

If the SOA version is 12.2.1 and the composite fails with the following error, deploy the composite AIAReadJMSNotificationProcess using the FieldWorkCustomDP.xml from SERVICES_LOCATION/soainfra/apps/services/sce/AIAReadJMSNotificationProcess

SCE composite AIAReadJMSNotificationProcess is failing with the following error message:

```
<bpelFault><faultType>0</faultType><runtimeFault xmlns="http://
schemas.oracle.com/bpel/extension"><part
name="summary"><summary>Problem evaluating XPath expression</
summary></part><part
name="code"><code>java.lang.RuntimeException</code></part><part
name="detail"><detail>java.lang.RuntimeException: Problem
evaluating XPath expression
at com.collaxa.cube.engine.xp.XP.exec(XP.java:220)
at com.collaxa.cube.engine.Script.exec(Script.java:111)
at
com.collaxa.cube.engine.ext.bpel.v1.wmp.BPEL1SwitchConditionWMP.__
executeStatements(BPEL1SwitchConditionWMP.java:74)
at
com.collaxa.cube.engine.ext.bpel.common.wmp.BaseBPELActivityWMP$1.
call(BaseBPELActivityWMP.java:197)
at
com.collaxa.cube.engine.ext.bpel.common.wmp.BaseBPELActivityWMP$1.
call(BaseBPELActivityWMP.java:195)
at
com.collaxa.bpel.sws.SWSComponentProcessActivityWrapper$1.call(SWS
ComponentProcessActivityWrapper.java:74)
at
com.collaxa.bpel.sws.SWSCallableActivityWrapper.execute(SWSCallabl
eActivityWrapper.java:89)
at
com.collaxa.bpel.sws.SWSComponentProcessActivityWrapper.execute(SW
SComponentProcessActivityWrapper.java:82)
at
com.collaxa.cube.engine.ext.bpel.common.wmp.BaseBPELActivityWMP.pe
rform(BaseBPELActivityWMP.java:205)
at
com.collaxa.cube.engine.CubeEngine.performActivity(CubeEngine.java
:2878)
at
com.collaxa.cube.engine.CubeEngine._handleWorkItem(CubeEngine.java
:1260)
at
com.collaxa.cube.engine.CubeEngine.handleWorkItem(CubeEngine.java:
1155)
at
com.collaxa.cube.engine.dispatch.message.instance.PerformMessageHa
ndler.handleLocal(PerformMessageHandler.java:92)
at
com.collaxa.cube.engine.dispatch.DispatchHelper.handleLocalMessage
(DispatchHelper.java:300)
```

```
at
com.collaxa.cube.engine.dispatch.DispatchHelper.sendMemory(Dispatc
hHelper.java:379)
at
com.collaxa.cube.engine.CubeEngine.endRequest(CubeEngine.java:4871
)
at
com.collaxa.cube.engine.CubeEngine.endRequest(CubeEngine.java:4795
)
at
com.collaxa.cube.engine.CubeEngine._createAndInvoke(CubeEngine.jav
a:751)
at
com.collaxa.cube.engine.CubeEngine.createAndInvoke(CubeEngine.java
:586)
at
com.collaxa.cube.engine.delivery.DeliveryService.handleInvoke(Deli
veryService.java:723)
at
com.collaxa.cube.engine.ejb.impl.CubeDeliveryBean.handleInvoke(Cub
eDeliveryBean.java:478)
at
com.collaxa.cube.engine.ejb.impl.bpel.BPELDeliveryBean_5k948i_ICub
eDeliveryLocalBeanImpl.__WL_invoke(Unknown Source)
at
weblogic.ejb.container.internal.SessionLocalMethodInvoker.invoke(S
essionLocalMethodInvoker.java:33)
at
com.collaxa.cube.engine.ejb.impl.bpel.BPELDeliveryBean_5k948i_ICub
eDeliveryLocalBeanImpl.handleInvoke(Unknown Source)
at
com.collaxa.cube.engine.dispatch.message.invoke.InvokeInstanceMess
ageHandler.handle(InvokeInstanceMessageHandler.java:43)
at
com.collaxa.cube.engine.dispatch.DispatchHelper.handleMessage(Disp
atchHelper.java:154)
at
com.collaxa.cube.engine.dispatch.BaseDispatchTask.process(BaseDisp
atchTask.java:150)
at
com.collaxa.cube.engine.dispatch.BaseDispatchTask.run(BaseDispatch
Task.java:90)
at
com.collaxa.cube.engine.dispatch.WMExecutor$W.run(WMExecutor.java:
236)
at
weblogic.work.j2ee.J2EEWorkManager$WorkWithListener.run(J2EEWorkMa
nager.java:207)
at
weblogic.invocation.ComponentInvocationContextManager._runAs(Compo
nentInvocationContextManager.java:348)
at
weblogic.invocation.ComponentInvocationContextManager.runAs(Compon
entInvocationContextManager.java:333)
at
weblogic.work.LivePartitionUtility.doRunWorkUnderContext(LiveParti
tionUtility.java:54)
at
weblogic.work.PartitionUtility.runWorkUnderContext(PartitionUtilit
y.java:41)
```

```
at
weblogic.work.SelfTuningWorkManagerImpl.runWorkUnderContext(SelfTu
ningWorkManagerImpl.java:617)
at weblogic.work.ExecuteThread.execute(ExecuteThread.java:397)
at weblogic.work.ExecuteThread.run(ExecuteThread.java:346)
Caused by: javax.xml.xpath.XPathExpressionException: XPath Function
{http://www.oracle.com/XSL/Transform/java/
oracle.apps.aia.core.xpath.AIAFunctions}getSystemModuleProperty
cannot be found.
at
oracle.xml.xpath.JXPathExpression.evaluate(JXPathExpression.java:2
69)
at com.collaxa.cube.engine.xp.XP.exec(XP.java:201)
... 36 more
Caused by: javax.xml.xpath.XPathFunctionException: XPath Function
{http://www.oracle.com/XSL/Transform/java/
oracle.apps.aia.core.xpath.AIAFunctions}getSystemModuleProperty
cannot be found.
at
com.collaxa.cube.engine.xp.XPFunction.lookup(XPFunction.java:74)
at
com.collaxa.cube.engine.xp.XPFunction.evaluate(XPFunction.java:53)
at
oracle.xml.xpath.JXPathContext$JXFunction.invoke(JXPathContext.jav
a:215)
at
oracle.xml.xpath.JXPathContext$JXFunction.invoke(JXPathContext.jav
a:182)
at
oracle.xml.xpath.XPathExtFunction.evaluate(XPathExtFunction.java:3
35)
at oracle.xml.xpath.ComparisonExpr.evaluate(XSLExpr.java:1743)
at
oracle.xml.xpath.JXPathExpression.evaluate(JXPathExpression.java:2
26)
... 37 more
</detail></part></runtimeFault></bpelFault>
```

Password Expiry for Database

If a password expires or is changed connection issues may arise with the Meta Data Store, AIAOUCCBNDSDS, or integration specific database AIANDSDS.

To address this issue:

1. Reset the password or unlock the corresponding DB schema (MDS, NDS database, or integration specific database).
2. Change the password for the data source through the WebLogic Administration Console for the DB schema where the password is changed/locked.
3. Change the password in the AIAInstallationProperties.xml for DB schema. This will be used when redeploying the integration using scripts.

Unable to Invoke Endpoint URI

You may encounter the following error:

Unable to invoke endpoint URI "https://host:port/contextroot/XAIApp/xaiserver/Servicename" successfully due to: javax.xml.soap.SOAPException: javax.xml.soap.SOAPException: Message send failed: sun.security.validator.ValidatorException: PKIX path validation failed: java.security.cert.CertPathValidatorException: signature check failed.

This indicates that the security certificates related to the edge application are not configured in the integration keystore. For more information, refer to Chapter 3: Configuring Edge Application Security Certificates in WebLogic.